

Claims

1. A closing buffer mechanism for the drawer slide track mainly comprises a buffer mechanism and a separable bumper assembly.

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The buffer mechanism constitutes a cylinder, a connecting rod and a piston, in which the cylinder is a section of tube with end sealed and one end opened. The cylinder is fixed on the outer edge of the slide track. The hollow of the cylinder permits the connecting rod to move in and out. The connecting rod has one end to receive the soft piston. The valve ring, of the piston, slightly larger than the bore of the cylinder seals the wall of the cylinder to form a chamber to store the compressed air.

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The separable bumper assembly can be either the suction assembly, the magnetic assembly or the snap assembly. This assembly has two parts are mounted on one end of the slide rod and the front end of the connecting rod respectively. When two parts are contacted, they link and move the connecting rod together inward the cylinder. When a counter force is applied, the separable bumper assembly separates.

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When the drawer is being closed, the moveable rod moves inward, brings the bumper assembly contacted and moved inward along the connecting rod which therefore compress the air at end chamber, the compressed air will gradually escape from the air passage formed between the cylinder wall and the piston. This compressed air works as a cushion action to absorb the thrust the moveable rod applies.

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2. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the air passage formed between the cylinder wall and the piston can be a vent slot at the end of the cylinder.

3. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the air passage formed between the cylinder wall and the piston can be a vent slot through the center of the valve ring.

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4. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the end of the cylinder provides a go through lock hole to receive the lock tendon of the piston as a means of fastening.

5. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the front end of the connecting rod is convex post.
6. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the separable bumper assembly comprises a suction tray and a bumper. The suction tray is fastened on the convex post of the connecting rod and the bumper is mounted on end of the moveable rod. When the suction tray contacts the bumper, these three move together.
7. The closing buffer mechanism for the drawer as claimed in the Claim 6, in which the suction tray has a go through lock hole at the axial direction to receive the lock tendon on the convex post of the connecting rod.
8. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the separable bumper assembly can be a magnetic assembly composed of a magnetic post and a bumper to take the place of the convex post. The bumper is fastened on the end of the moveable rod, when contacted, these three move together too.
9. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the separable bumper assembly can be a snap assembly where the post of the convex post is inserted and held in the socket of the bumper on the moveable rod so these three move together.
10. The closing buffer mechanism for the drawer as claimed in the Claim 1, in which the cylinder has an open end and a hole in the wall, the open end is sealed with an adjusting valve and the open passes the wall to form an air hole. An adjusting valve works as a plug to close the open end of the cylinder and to control the openness of the air hole and the discharging amount of compressed air in an effort to obtain the desirable cushion action for the buffer mechanism.